

Exam simulation

ATPL - Airline Transport Pilot license - Mass and Balance

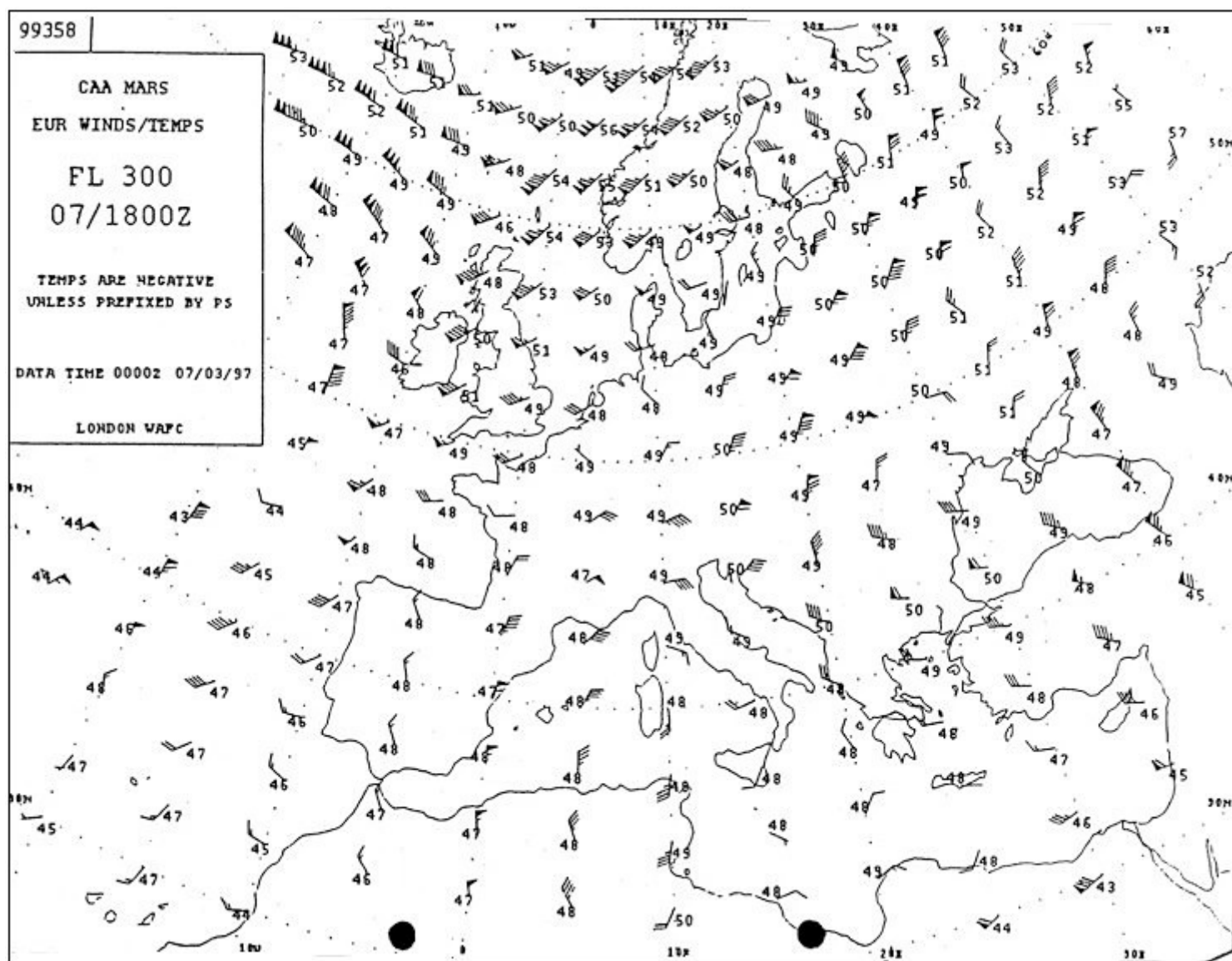


QuizVds.it

STUDENT NAME:

DATE AND TIME:

01. What is the mean temperature deviation (°C) from the ISA over 50°N 010°W ?



- a) +9
- b) +2
- c) +13
- d) -2

Exam simulation

ATPL - Airline Transport Pilot license - Mass and Balance



QuizVds.it

02. An ATS airspace where IFR and VFR flights are permitted and all flights are subject to air traffic control service. IFR flights are separated from other IFR flights and receive traffic information in respect of VFR flights. VFR flights receive traffic information in respect of all other flights, is classified as:

- a) Airspace B
- b) Airspace D
- c) Airspace A
- d) Airspace E

03. Refer to Student Pilot Route Manual London, Heathrow (Plate 10- 3): Which of the following is a correct Minimum Safe Altitude (MSA) for the Airport?

- a) West sector 2300 ft within 25 NM
- b) East sector 2100 ft within 50 NM
- c) West sector 2100 ft within 25 NM
- d) East sector 2300 ft within 50 NM

04. Given: Distance from departure to destination: 210 NM Endurance: 2,5 h True Track: 035 W/V: 250/20 TAS: 105 kt. What is the distance of the PSR from the departure point?

- a) 64 NM
- b) 88 NM
- c) 172 NM
- d) 127 NM

05. An aircraft encountering radio communication failure on an IFR flight in VMC is assumed to:

- a) Leave controlled airspace and continue the flight within uncontrolled airspace
- b) Continue to fly in VMC, land at the nearest suitable aerodrome, report its arrival
- c) Continue the flight to destination aerodrome in any case
- d) Squawk IDENT and proceed to the alternate aerodrome

06. The danger associated with low speed and/or high speed buffet

- a) Can be reduced by increasing the load factor.
- b) Limits the manoeuvring load factor at high altitudes.
- c) Has to be considered at take-off and landing.
- d) Exists only above MMO.

Exam simulation

ATPL - Airline Transport Pilot license - Mass and Balance



QuizVds.it

07. Given: True Heading = 090° TAS = 180 kt. GS = 180 kt. Drift 5° right. Calculate the W/V?

- a) 190° / 15 kt
- b) 005° / 15 kt
- c) 185° / 15 kt
- d) 355° / 15 kt

08. Most large conventional aeroplanes are not provided with aileron and rudder trim tabs. Is it still possible to trim these control surfaces?

- a) Yes, trimming is possible by adjusting the neutral point of the artificial feel mechanism by means of a trim switch.
- b) No, because without trim tabs trimming is not possible.
- c) Yes, but trimming is only possible when before the flight, the respective auxiliary surfaces are correctly adjusted for cruising conditions by the maintenance department.
- d) Yes, but trimming is only possible when the autopilot is engaged.

09. Whenever ATIS is provided, the broadcast information shall be updated

- a) At least every half an hour independently of any significant change
- b) Immediately a significant change occurs
- c) As prescribed by the state
- d) As prescribed by the meteorological office

10. Which one of the following sets of conditions is the least likely to attract flocks of birds?

- a) An area liable to flooding
- b) Edible rubbish
- c) Short gang-mown grass
- d) Long grass

11. After alignment of the stable platform of an Inertial Navigation System, the output data from the platform is:

- a) Acceleration north/south and east/west, attitude and true heading
- b) Latitude, longitude and true heading
- c) Acceleration north/south and east/west and true heading
- d) Latitude, longitude and attitude

Exam simulation

ATPL - Airline Transport Pilot license - Mass and Balance



QuizVds.it

12. Vortex generators:

- a) Change the turbulent boundary layer into a laminar boundary layer
- b) Reduce the spanwise flow on swept wing
- c) Transfer energy from the free airflow into the boundary layer
- d) Take kinetic energy out of the boundary layer to reduce separation

13. Who in the aviation industry is responsible for flight safety?

- a) Aircrew and Ground crew
- b) Aircrew
- c) Management, Aircrew, Ground crew and ATC
- d) Everyone involved

14. The speed limitation for VFR flights inside ATS airspace classified as C, when flying below 3.050 m (10.000 ft) AMSL, is:

- a) 250 KT TAS
- b) 250 KT IAS
- c) 240 KT IAS
- d) Not applicable

15. In order to perform a steady level turn at constant speed in an aeroplane, the pilot must:

- a) Increase thrust/power and keep angle of attack unchanged.
- b) Increase thrust/power and decrease angle of attack.
- c) Increase thrust/power and angle of attack.
- d) Increase angle of attack and keep thrust/power unchanged.

16. The take-off mass of an aeroplane is 141000 kg. Total fuel on board is 63000 kg including 14000 kg reserve fuel and 1000 kg of unusable fuel. The traffic load is 12800 kg. The zero fuel mass is:

- a) 79000 kg
- b) 65200 kg.
- c) 93000 kg
- d) 78000 kg

Exam simulation

ATPL - Airline Transport Pilot license - Mass and Balance



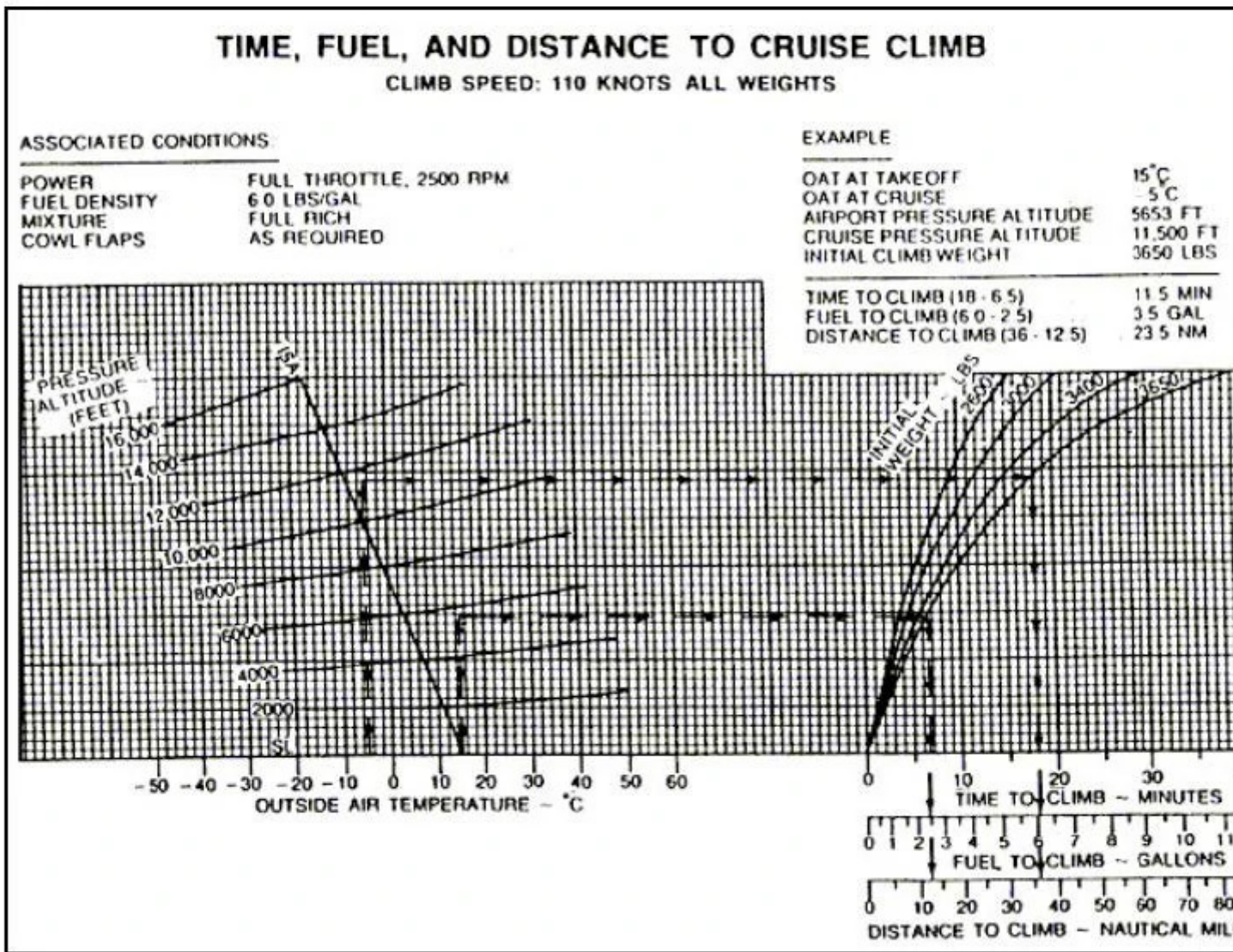
QuizVds.it

17. Refer to CAP 697 Section 2 SEP1 Page 3 Figure 2.1 Time, Fuel and Distance to Climb. Given: Take-off mass 3500 lbs, aerodrome pressure altitude 2500 ft, OAT +10°C, First cruising level: FL 140, OAT -5°C Find the time, fuel and still air distance

CIVIL AVIATION AUTHORITY
FUJI PI ANNING & MONITORING

DATA SHEET
SFP 1

FIGURE 2.1 TIME FUEL AND DISTANCE TO CLIMB



Exam simulation

ATPL - Airline Transport Pilot license - Mass and Balance



QuizVds.it

- a) 24 min, 7.7 gal, 47 NAM
- b) 16.5 min, 4.9 gal, 34.5 NAM
- c) 23.5 min, 7.1 gal, 48.5 NAM
- d) 23 min, 7.7 gal, 50 NAM

Exam simulation

ATPL - Airline Transport Pilot license - Mass and Balance



QuizVds.it

18. The reason for a double switch on the elevator trim is:

- a) To prevent both pilots from performing opposite trim inputs.
- b) Because there are two trim motors.
- c) To be able to use two different trim speeds, slow trim rate at high speed and high trim rate at low speed.
- d) To reduce the probability of a trim runaway.

19. When radar identification of aircraft has been achieved, ATC unit shall:

- a) Inform the aircraft only if communication's load permits it.
- b) Inform the aircraft prior to issue any instructions or advice based on the use of radar.
- c) Inform the aircraft only if radar identification has been achieved without availability of SSR.
- d) Not advise the aircraft before issuing instructions.

20. A straight line is drawn on a Lambert's conformal conic chart between two positions of different longitude. The angular difference between the initial true track and the final true track of the line is equal to:

- a) Conversion angle
- b) Earth convergency
- c) Difference in longitude
- d) Chart convergency

21. To optimise one's night-vision performance, it is necessary: - 1: to spend some time getting adapted to low levels of illumination - 2: to increase the instrument panel lighting by reducing the cockpit lighting - 3: not to focus on the point to be observed - 4: to avoid blinding sources of light

- a) 1,2,4
- b) 2,3,4
- c) 1,3,4
- d) 2

22. A jet aeroplane is cruising at high altitude with a Mach-number, that provides a buffet margin of 0.3g incremental. In order to increase the buffet margin to 0.4g incremental the pilot must:

- a) Extend the flaps to the first selection
- b) Fly at a higher Mach-number
- c) Fly at a lower altitude and the same Mach-number
- d) Fly at a larger angle of attack

Exam simulation

ATPL - Airline Transport Pilot license - Mass and Balance



QuizVds.it

23. For a pressurised aircraft, the supplemental oxygen is:

- a) The oxygen supplied to a passenger who needs oxygen for physiological reasons.
- b) The oxygen used for protection against smoke and carbon dioxide.
- c) The oxygen supplied to the aeroplane occupants in case of cabin pressurisation failure.
- d) A therapeutic oxygen specifically carried for certain passengers.

24. A passenger's sporting shotgun may be carried on an aircraft:

- a) With the commander's permission, unloaded in an overhead locker.
- b) But not if it is a public transport flight.
- c) With the operator's permission, the commander's knowledge, unloaded and in a place where the passengers have no access.
- d) With the operator's permission.

25. Between which components, with reference to the SHELL Concept, covers pilot misinterpretation of the old three-point altimeter?

- a) Liveware - Environment
- b) Liveware - Software
- c) Liveware - Liveware
- d) Liveware - Hardware

26. The drift down procedure specifies requirements concerning the:

- a) Engine power at the altitude at which engine failure occurs.
- b) Climb gradient during the descent to the net level-off altitude.
- c) Obstacle clearance after engine failure.
- d) Weight during landing at the alternate.

27. Physical exercise in high temperatures (tropical climates) may:

- a) Increase a pilot's resistance to decompression sickness
- b) Cause the pilot to collapse, due to an excess of fluid in the body
- c) Cause dysentery
- d) Cause painful muscle and abdominal cramps

Exam simulation

ATPL - Airline Transport Pilot license - Mass and Balance



QuizVds.it

28. The fuel tanks of aircrafts must be checked for water

- a) Immediately after every refuelling.
- b) During refuelling.
- c) Before the first flight of the day or after a long turnaround time.
- d) Before each flight.

29. The lift formula is: (rho = density)

- a) $L = C_L \frac{1}{2} \rho V^2 S$
- b) $L = n W$
- c) $L = C_L 2 \rho V^2 S$
- d) $L = W$

30. In a turbo-jet, the purpose of the turbine is to ...

- a) Clear the burnt gases, the expansion of which provide the thrust.
- b) Compress the air in order to provide a better charge of the combustion chamber.
- c) Drive the compressor by using part of the energy from the exhaust gases.
- d) Drive devices like pumps, regulator, generator.

31. An aircraft carrying out an ILS approach is receiving more 90 Hz than 150 Hz modulation notes from both the localiser and glidepath transmitters. The ILS indication will show:

- a) Fly left and fly up
- b) Fly right and fly down
- c) Fly right and fly up
- d) Fly left and fly down

32. The correct RT call to request a Traffic Service is:

- a) Westbury Approach, G-ABCD, request Traffic Service.
- b) Westbury Approach, G-ABCD, request radar vectors.
- c) Westbury Approach, G-ABCD, request deconfliction advice.
- d) Westbury Approach, G-ABCD, request RIS.

Exam simulation

ATPL - Airline Transport Pilot license - Mass and Balance



QuizVds.it

33. The point at which a tangent out of the origin touches the power required curve

- a) Is the point where Drag coefficient is a minimum.
- b) Is the point where the Lift to Drag ratio is a minimum.
- c) Is the point where the Lift to Drag ratio is a maximum.
- d) Is the maximum drag speed.

34. What is the correct way of transmitting the number 3500 when indicating an altitude or an height?

- a) Three five hundred
- b) Three five zero zero
- c) Three five double zero
- d) Three thousand five hundred

35. What is the correct way of transmitting 1001 as a QNH?

- a) QNH one double 'O' one
- b) QNH one zero zero one
- c) QNH one double zero one
- d) QNH one thousand and one

36. The centre of gravity is the

- a) Centre of thrust along the longitudinal axis, in relation to a datum line
- b) Point where all the aircraft mass is considered to be concentrated
- c) Neutral point along the longitudinal axis, in relation to a datum line
- d) Focus along the longitudinal axis, in relation to a datum line

37. Incapacitation is most dangerous when it is:

- a) Obvious
- b) Sudden
- c) Insidious
- d) Intense

Exam simulation

ATPL - Airline Transport Pilot license - Mass and Balance



QuizVds.it

38. When transmitting a message preceded by the phrase 'Transmitting blind due to receiver failure' during an en-route flight, the aircraft station shall also:

- a) Land at the nearest airfield/airport
- b) Join base leg when approaching the airfield for landing
- c) Return to the airport of departure
- d) Advise the time of its next intended transmission

39. The lowest point of the thrust required curve of a jet aeroplane is the point for:

- a) Maximum specific range
- b) Minimum drag
- c) Minimum specific range
- d) Minimum endurance

40. The data supplied by a radio altimeter:

- a) Is used only by the radio altimeter indicator.
- b) Concerns only the decision height.
- c) Is used by the automatic pilot in the altitude hold mode.
- d) Indicates the distance between the ground and the aircraft.

41. A message concerning a protected medical transport operated by aircraft assigned exclusively to medical transportation shall be preceded by the signal:

- a) MEDICAL TRANSPORT
- b) PAN PAN MEDICAL
- c) PAN PAN TRANSPORT
- d) PROTECTED TRANSPORT

42. Lights indicating the possible need for future corrective action must be:

- a) Red.
- b) Amber.
- c) Magenta.
- d) Red and white striped.

Exam simulation

ATPL - Airline Transport Pilot license - Mass and Balance



QuizVds.it

43. Constant-speed propellers provide a better performance than fixed-pitch propellers because they:

- a) Produce a greater maximum thrust than a fixed-pitch propeller.
- b) Have a higher maximum efficiency than a fixed-pitch propeller.
- c) Have more blade surface area than a fixed-pitch propeller.
- d) Produce an almost maximum efficiency over a wider speed range.

44. Which of the following frequencies is an international emergency frequency:

- a) 6500 kHz
- b) 122.500 MHz
- c) 121.050 MHz
- d) 121.500 MHz

45. Which word or phrase shall be used in order to repeat for clarity or emphasis?

- a) Confirm
- b) Read back
- c) I say again
- d) Verify

46. Radio silence can be imposed by an aeronautical station in case of:

- a) Urgency communication
- b) Distress traffic
- c) Technical difficulties
- d) Overload of the frequency

47. The fields affecting a magnetic compass originate from: 1. magnetic masses 2. ferrous metal masses 3. non ferrous metal masses 4. electrical currents. The combination regrouping all the correct statements is:

- a) 1, 2, 3, 4
- b) 1, 2, 3
- c) 1, 3, 4
- d) 1, 2, 4

Exam simulation

ATPL - Airline Transport Pilot license - Mass and Balance



QuizVds.it

48. Given: Distance from departure to destination 340 NM True track 320 W/V 160/40 TAS 110 kt What is the distance of the PET from the departure point?

- a) 228 NM
- b) 112 NM
- c) 219 NM
- d) 121 NM

49. Excluding RVSM an appropriate flight level for IFR flight in accordance with semi-circular height rules on a magnetic course of 200° is:

- a) FL320
- b) FL310
- c) FL300
- d) FL290

50. 'The Bends' as a symptom of decompression sickness consists of:

- a) Pain in the joints
- b) Loss of peripheral vision
- c) CNS-disturbances
- d) Pain in the thorax and a cough

51. ATC clears Fastair 345 to descend from FL 100 to FL 80. What is the correct read back by the pilot:

- a) Leaving flight level 100 descending to flight level 80, Fastair 345
- b) Leaving 100 to 80, Fastair 345
- c) Down to flight level 80, Fastair 345
- d) Descending to 80, Fastair 345

52. A straight line on a chart 4.89 cm long represents 185 NM. The scale of this chart is approximately:

- a) 1: 7 000 000
- b) 1: 5 000 000
- c) 1: 6 000 000
- d) 1: 3 500 000

Exam simulation

ATPL - Airline Transport Pilot license - Mass and Balance



QuizVds.it

53. A jet aeroplane equipped with old engines has a specific fuel consumption of 0.06 kg per Newton of thrust and per hour and, in a given flying condition, a fuel consumption of 14 kg per NM. In the same flying conditions, the same aeroplane equipped with modern engines with a specific fuel consumption of 0.035 kg per Newton of thrust and per hour, has a fuel consumption per NM of:

- a) 11.7 kg / NM
- b) 14 kg / NM
- c) 10.7 kg / NM
- d) 8.17 kg / NM

54. Which statement is correct regarding a shockwave on a lift generating wing?

- a) It reaches its highest strength when flying at the critical Mach number
- b) It moves slightly aft when an aileron is deflected downward
- c) It is located at the greatest wing thickness when the aeroplane reaches the speed of sound
- d) It moves forward when the Mach number is increased

55. The actual 'Take-off Mass' is equivalent to:

- a) Actual Zero Fuel Mass plus the traffic load
- b) Dry Operating Mass plus the take-off fuel
- c) Dry Operating Mass plus take-off fuel and the traffic load
- d) Actual Landing Mass plus the take-off fuel

56. To minimize the risk of hydroplaning during landing the pilot should:

- a) Use maximum reverse thrust, and should start braking below the hydroplaning speed.
- b) Use normal landing-, braking- and reverse technique.
- c) Make a 'positive' landing and apply maximum reverse thrust and brakes as quickly as possible.
- d) Postpone the landing until the risk of hydroplaning no longer exists.

57. What does the word 'disregard' mean?

- a) Consider that transmission as not sent
- b) Wait and I will call you
- c) Annul the previously transmitted clearance
- d) An error has been made in this transmission

Exam simulation

ATPL - Airline Transport Pilot license - Mass and Balance



QuizVds.it

58. Hoar frost is most likely to form when

- a) Flying inside convective clouds.
- b) Flying inside stratiform clouds.
- c) Taking off from an airfield with a significant ground inversion (sky clear).
- d) Flying in supercooled drizzle.

59. An aircraft encountering radio communication failure on an IFR flight in IMC has to land, if possible, within:

- a) 30 minutes after noticing the radio failure
- b) 30 minutes after ETA or the last EAT, whichever is later
- c) 15 minutes after vacating the transition layer
- d) 30 minutes after waiting for the EAT

60. The function of a constant speed drive (CSD) in an AC generating system is to:

- a) Directly maintain a constant proportion between the RPM of an engine and a generator.
- b) Vary generator RPM in order to compensate for various AC loads.
- c) Vary the engine RPM (within limits) to compensate for various AC loads.
- d) Drive the generator at a constant speed.

61. Flap selection at constant IAS whilst maintaining straight and level flight will increase the:

- a) Lift coefficient and the drag
- b) Maximum lift coefficient (CLmax) and the drag
- c) Lift and the drag
- d) Stall speed

62. The primary reason for a limitation being imposed on the temperature of gas flow is to:

- a) Prevent overheating and subsequent creep of the nozzle guide vanes.
- b) Prevent damage to the jet pipe from overheating.
- c) Ensure that the maximum acceptable temperature within the combustion chamber is not exceeded.
- d) Ensure that the maximum acceptable temperature at the turbine blades is not exceeded.

Exam simulation

ATPL - Airline Transport Pilot license - Mass and Balance

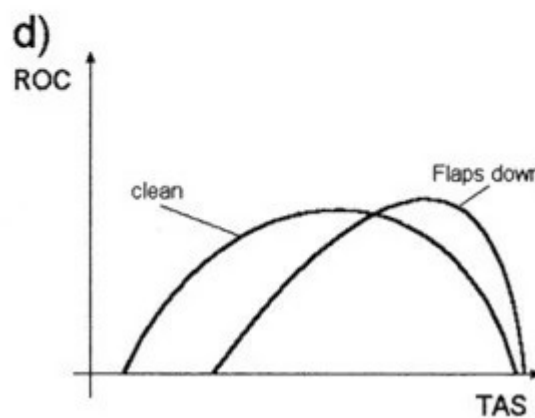
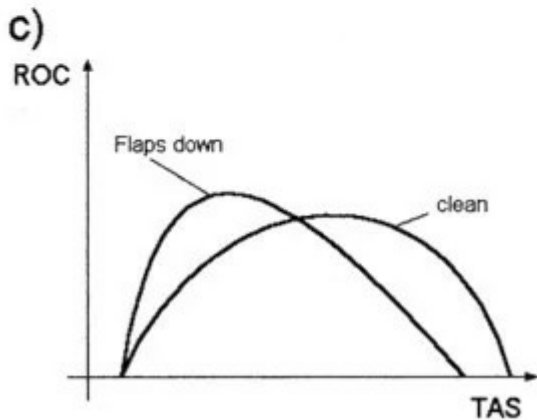
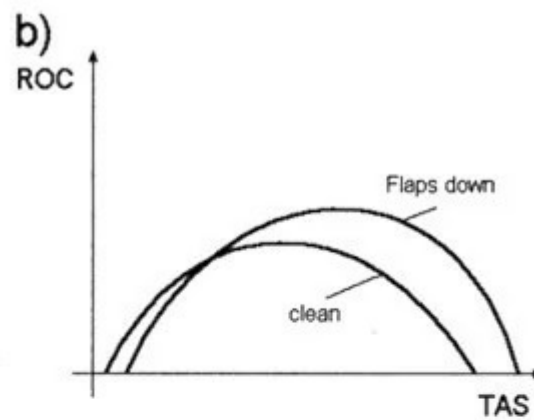
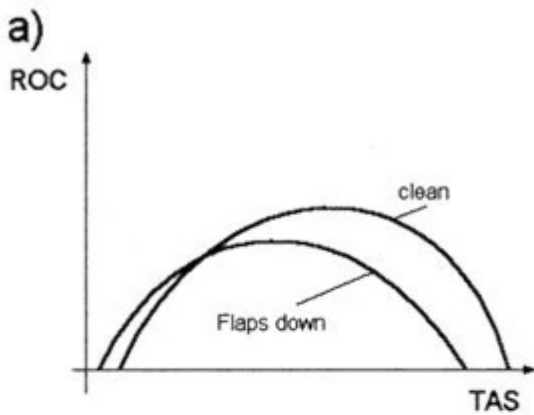


QuizVds.it

63. Where, in central Europe, are the highest wind speeds to be found?

- a) Close to the ground.
- b) At an altitude of about 5 500 m.
- c) In the stratosphere.
- d) Just below the tropopause.

64. Considering a rate of climb diagram (ROC versus TAS) for an aeroplane. Which of the diagrams shows the correct curves for 'flaps down' compared to 'clean' configuration?



- a) B
- b) C
- c) A
- d) D

Exam simulation

ATPL - Airline Transport Pilot license - Mass and Balance



QuizVds.it

65. The most widely used electrical frequency in aircraft is:

- a) 50 Hz.
- b) 200 Hz.
- c) 60 Hz.
- d) 400 Hz.

66. When filling in an ATC flight plan before departure, the time information which should be entered in item 13: 'Time' is:

Exam simulation

ATPL - Airline Transport Pilot license - Mass and Balance



QuizVds.it

- a) Planned take-off time.
- b) Estimated off-block time.
- c) The time of flight plan filing.
- d) Planned engine start time.

Exam simulation

ATPL - Airline Transport Pilot license - Mass and Balance



QuizVds.it

67. The result of a higher flap setting up to the optimum at take-off is:

- a) An increased acceleration
- b) A higher V1
- c) A shorter ground roll
- d) A longer take-off run

68. Which is true of the aircraft basic empty mass?

- a) It is a component of dry operating mass.
- b) It is the actual take-off mass, less traffic load.
- c) It is dry operating mass minus traffic load.
- d) It is dry operating mass minus fuel load.

69. ETOPS flight is a twin engine jet aeroplane flight conducted over a route, where no suitable airport is within an area of:

- a) 60 minutes flying time in still air at the normal cruising speed
- b) 30 minutes flying time at the normal cruising speed
- c) 60 minutes flying time in still air at the approved one engine out cruise speed
- d) 75 minutes flying time at the approved one engine out cruise speed

70. Longitudinal separation minima based on time for aircraft at the same cruising level when navigation aids permit frequent determination of position and speed will be

- a) 10 minutes
- b) 3 minutes
- c) 5 minutes
- d) 15 minutes

Exam simulation

ATPL - Airline Transport Pilot license - Mass and Balance



QuizVds.it

Response Scheme

Compare your answers with the following diagram and mark your score!

01: D	02: B	03: C	04: D
05: B	06: B	07: B	08: A
09: B	10: D	11: A	12: C
13: D	14: B	15: C	16: A
17: C	18: D	19: B	20: D
21: C	22: C	23: C	24: C
25: D	26: C	27: D	28: C
29: A	30: C	31: B	32: A
33: C	34: D	35: B	36: B
37: C	38: D	39: B	40: D
41: B	42: B	43: D	44: D
45: C	46: B	47: D	48: B
49: B	50: A	51: A	52: A
53: D	54: B	55: C	56: C
57: A	58: C	59: B	60: D
61: B	62: D	63: D	64: C
65: D	66: B	67: C	68: A
69: C	70: A		

Exam simulation

ATPL - Airline Transport Pilot license - Mass and Balance



QuizVds.it

Response form

Use this form to mark your answers

01: _____	02: _____	03: _____	04: _____
05: _____	06: _____	07: _____	08: _____
09: _____	10: _____	11: _____	12: _____
13: _____	14: _____	15: _____	16: _____
17: _____	18: _____	19: _____	20: _____
21: _____	22: _____	23: _____	24: _____
25: _____	26: _____	27: _____	28: _____
29: _____	30: _____	31: _____	32: _____
33: _____	34: _____	35: _____	36: _____
37: _____	38: _____	39: _____	40: _____
41: _____	42: _____	43: _____	44: _____
45: _____	46: _____	47: _____	48: _____
49: _____	50: _____	51: _____	52: _____
53: _____	54: _____	55: _____	56: _____
57: _____	58: _____	59: _____	60: _____
61: _____	62: _____	63: _____	64: _____
65: _____	66: _____	67: _____	68: _____
69: _____	70: _____		